Dear FCC,
*Regarding the Notice of Inquiry in ET Docket 03-104,
please refer to my previous posting on 6/24/03.

*Regarding a recent posting in reference to the ANSI C63.4
testing guidelines, it is very likely that the 30 meter
limits are inadequate. Most residential structures are
located far less than this distance to any power lines.
And the conducted noise, not only radiated noise
would carry unwanted energy to a sensitive HF receiver.

*In reference to wire length tests, testing done with 1/2,
1/4, and 1/8th wavelength is inadequate because the actual
conductors that will be used are thousands of times greater
in length than these tests, therefore the incident SWR of the
system under test would have optimal results compared to
the "infinite" actual lossy conductors in the power grid.
Also the test will not account for lossy line insulators
and faulty grounds and rectifying leakages extensively
found in the power system grid today. These all will cause
unpredictable spectrum noise which the power Co's today
cannot handle.

*The antenna position test is strictly "near field" and
will not account for possible ground wave and skip zone
distances. This is especially true for the bands between
14 and 28Mhz during the daytime, 10Mhz and below at night.
Will the test look for unwanted reception of signal at
various skip distances? The polatity of the test antenna
is unimportant in skip zone testing as the ionosphere
will distort the polarity in a random fasion.

*The wire termination testing is again at fault because of
the very long conductors that will be used. In just one
wavelength the return conductor will have an open and a
short to the termination, depending on base frequency.
With the wideband signals considered, this is impractical
as the wavelength will be variable to ground.
Most power service to an outlet is fed by more than 1/2
wavelength of unshielded cable at HF frequencies,
thus the return line would variably have an open circuit
to ground at these frequencies. The power co. would have
to install a ground rod through the floor within inches
right next to each and every BPL modem. I don't think
they will be willing to do this.

Summary:

The testing and proposals described by said guidelines are
inadequate to determine effective "far field" noise levels
to sensitive HF band receivers. Additionally, they do not
account for effects of "near field" high EIRP HF/VHF/UHF
transmissions introduced into the system.
Therefore this proposal is out of the question.

Sincerely,

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A.R.S. W2CO
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